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MirrorServer/2

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1 Preface

This document describes the commissioning and operation of the NOS-Box. The NOS-Box serves as a data store for information and data provided by the brands of the Volkswagen group, importers or other providers (e.g. online training videos, software updates for VAS testers, updates of the vehicle software etc.) for the dealer. The NOS-Box automatically updates the data provided at specified intervals and provides information on the status of the updates.

2 Audience

The manual is aimed primarily at those responsible for the operation of the NOS-Box on the dealer side. Administrators are required for some tasks.

3 Introduction

This guide describes all the activities for the commissioning of a NOS-Box that are required in connection with a MirrorServer/2 System. In addition, it contains a description of how to use the MirrorServer/2 Provider Maintenance for Customers and provides information to troubleshoot problems.

4 Setup of the NOS-Box

4.1 **Preparation**

To operate the NOS-Box, the following conditions must be met:

- You must have an **Ethernet cable** for connecting the NOS-Box to your network.
- You must have the **MirrorServer/2 CF card** to configure your NOS-Box.
  In general, the CF card is part of the NOS-Box package, but may be shipped separately.
- A **PC** connected to your network with a **CD-ROM drive** for activating the documentation and programs on the included CD. Additionally you need a **browser** that you can connect to the NOS-Box.
- To resolve the URL *"http://mirrorserver"* in your network there must be an entry within your DNS server resolving the IP address of the NOS-Box. That means the NOS-Box must match the alias *"mirrorserver"* with a physical IP address that is shown in the display. The DNS name is used by different programs like DMS-backbone that want to get data out of the NOS-Box. To configure the DNS server please contact your system administrator.
- If you use basic authentication to download the data from the MirrorServer/2 provider/importer instance, you must obtain username and password from your provider/importer before you can use basic authentication (see 4.4.5 Using basic authentication).

4.2 **Delivery**
In the NOS-Box package you will find the following items:

- NOS-Box
- MirrorServer/2 CF card
- Power supply, two parts
- Quick start guide
- CD-ROM with software and manuals

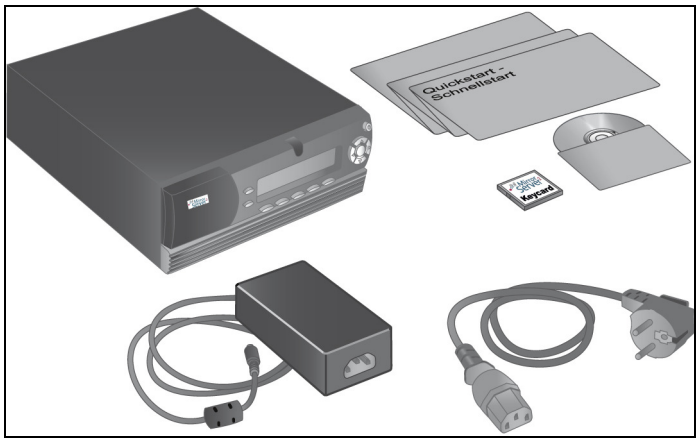


Figure 1: *Delivery of NOS-Box*

If the MirrorServer/2 CF card is not included in the package, please check whether you separately received the card separately (see 4.1 Preparation). For any questions please contact your importer/service partner.

4.3 **Initial start-up**
1. Unpack the NOS-Box. Please insert the CF card behind the front left cover. Reclose the cover.

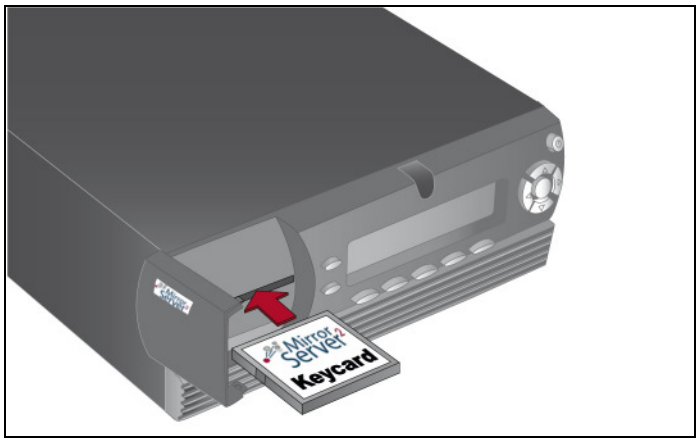


Figure 2: Insert the MirrorServer/2 CF card into the NOS-Box

Remark: Please do not remove the card during operation! If you want to change the card please always shut down the NOS-Box (see 4.5 Shutting down the NOS-Box**).**

2. Please supply the NOS-Box with power and connect it to the network. All connectors are located on the back of the box.

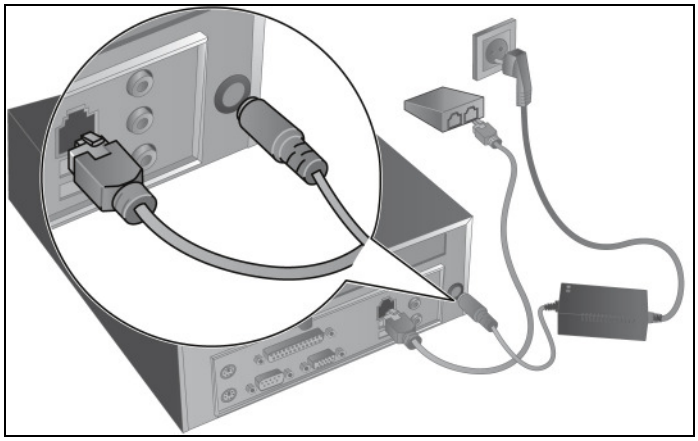


Figure 3: Connect the NOS-Box to power and network

Remark: The display will be aluminized when the box is plugged in. At this time the boot process has not yet started.

3. Please switch on the NOS-Box at the power button. The button is located on the front right corner of the box. The boot process starts when the power button is red. This may take a few minutes. Meanwhile the display may turn dark. When the IP address (Example: “10.77.24.57”) is displayed, the process has finished.

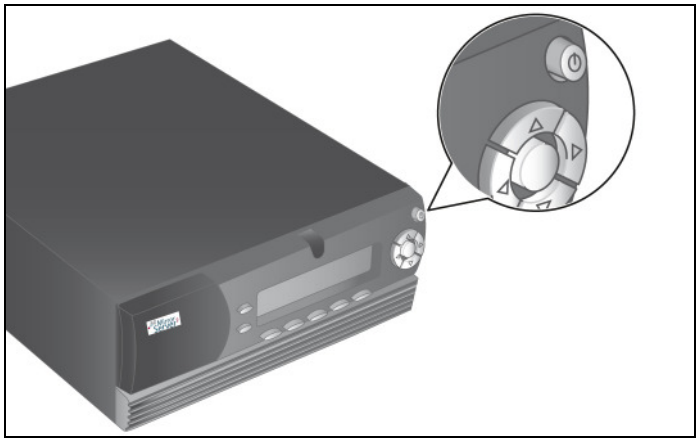


Figure 4: Boot the NOS-Box

4. When the IP address is displayed, the NOS-Box is ready for operation.

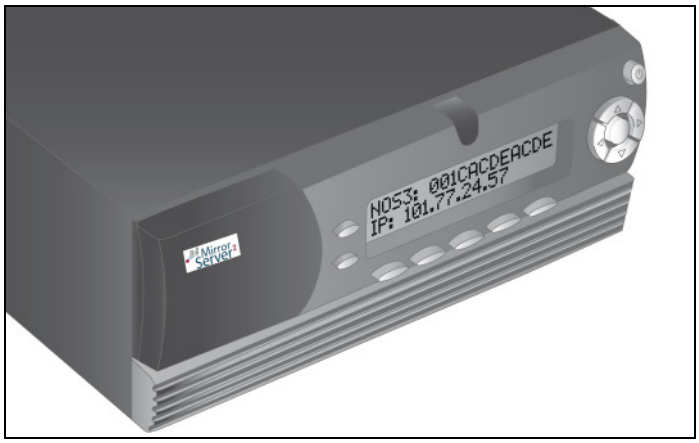


Figure 5: Signaling of readiness by the NOS-Box

5. The start-up and installation of the NOS-Box have been successfully completed if this check is positive: Enter the address into the browser on your desktop PC http://mirrorserver/maintenance/welcome.html (see 4.1 Preparation):

Figure 6: Welcome screen of the NOS-Box

The system is trying to connect to the preconfigured server instance at the importer/provider level. The test takes some time so please wait. After all basic tests have been completed, the screen contains the diagnostic results. For more information please refer to 6.2 Diagnostic website.

4.4 **Configuration**

The individual configuration of specific parameters from your NOS-Box is predefined on the MirrorServer/2 CF card. The necessary information was defined during the ordering process by your

importer. However you always have the option of adapting the configuration of the NOS-Box to your specific needs by using the program *nos-configurator.exe* on the CD delivered with the NOS-Box.

Insert the CD into a CD drive. The contents of the CD should be automatically displayed. If you have any trouble please click in your Windows Explorer on the CD drive and double click the *index.html* file located there.

Switch to your language and in the second menu column select the “programs” item. You will see a list. Click on the entry “NOS Configurator” to start the configuration tool for the NOS-Box.

Note: Depending on your browser you need to confirm some security information. Alternatively you can start the NOS configurator directly from the directory where it is located on the CD drive: Programs> Your Language> NOS configurator> nos-configurator.exe

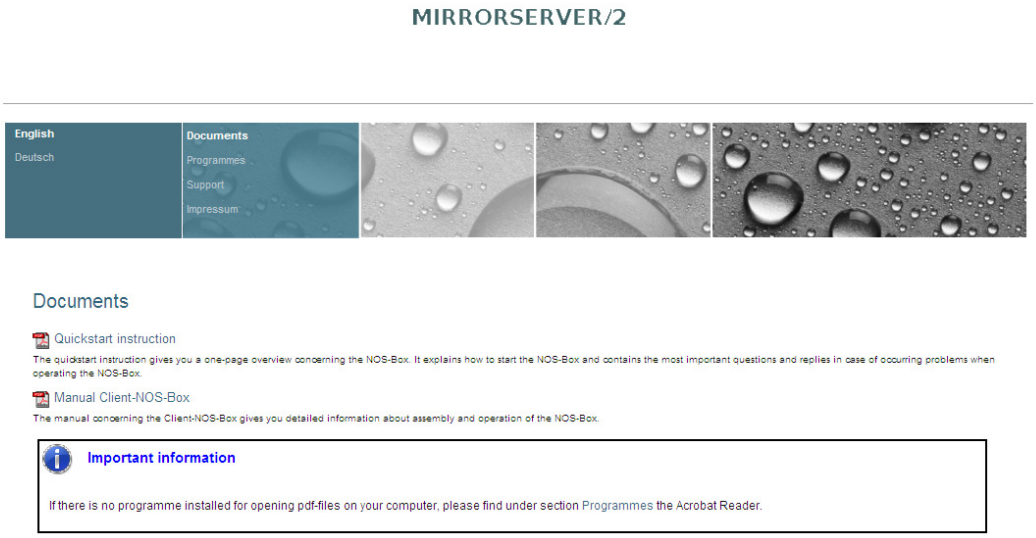

MIRRORSERVER/2
English
Deutsch
Documents
Programmes
Support
Impressum
Documents
Quickstart instruction
The quickstart instruction gives you a one-page overview concerning the NOS-Box. It explains how to start the NOS-Box and contains the most important questions and replies in case of occurring problems when operating the NOS-Box.
Manual Client-NOS-Box
The manual concerning the Client-NOS-Box gives you detailed information about assembly and operation of the NOS-Box.
Important information
If there is no programme installed for opening pdf-files on your computer, please find under section Programmes the Acrobat Reader.

Figure 7: GUI of the NOS-Box companion CD

4.4.1 Search for the NOS-Box within your network

The first step when using the NOS configurator.exe is to establish a connection to your local NOS-Box. To do this, click the button *"Discover NOS Box"* on the bottom left of the dialog box:

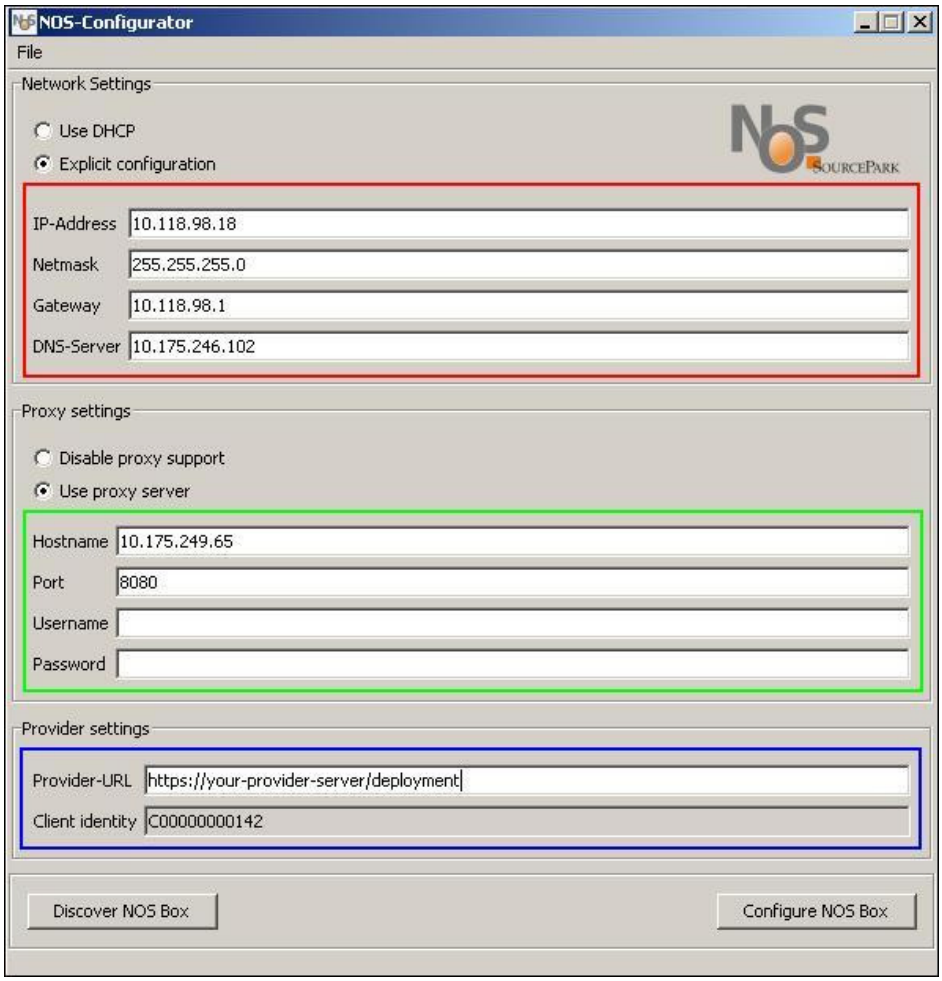


Figure 8: The NOS configurator

The current configuration of the NOS-Box is now read and displayed.

.

Note: If the search was not successful try to access the NOS-Box from another computer on the network. If this does not succeed please connect the NOS-Box with a computer directly via a hub in your network and then try again.

4.4.2 Enter the addresses

In the first section you configure the IP address settings of your network for the NOS-Box.
If you select *"Use DHCP"* all the required data from the DHCP server is downloaded automatically when the NOS-Box is started.

If you want to configure the IP address settings manually, select *Manual Setup.* To obtain the necessary data, contact your local administrator.

4.4.3 **Proxy settings**

For the successful synchronization of data you need to connect to your data provider (provider or importer depending on you configuration). If this link is provided in your company through a proxy server please select *"Use proxy server".* Otherwise please select *"Do not use proxy server".*

If you have selected the option “Use proxy server" please enter the required information. If your proxy uses basic authentication you must also enter the user name and password. To obtain this information, please contact your local administrator.

Please note that you must enter *none* for user name and password, even if your proxy server does not support basic authentication.

4.4.4 **Provider preferences**

If your provider changes or has a new URL, you can also change the data in the Provider URL field. The client identity is assigned at the factory and cannot be changed.

4.4.5 **Using basic authentication**

If you need to synchronize the data with your provider through basic authentication, the delivered NOS-Box cannot connect to MirrorServer/2 provider server successfully. You have to add your user name and password to the configuration on the NOS-Box. To obtain the specific user name and password, please contact your importer.

To change the values please click in the text box of the provider URL (see Figure 8: The NOS configurator) and change the URL from http://mirrorserver.importeur.com to http://[username]:[password]@mirrorserver.importeur.com.

4.4.6 **Saving the settings**

To save a modified configuration press the button “Save configuration”. First the system searches for the NOS-Box within the network and then rewrites it with the changed parameters.

Note: If the NOS-Box could not be found during the saving process please see the instructions in the NOS-Box configuration section, chapter “4.4.1 Search for the NOS-Box within your network”.

The settings can be checked using the NOS-Box interface, which starts immediately after the nos-config.exe has been run (see Figure 8: The NOS configurator).

4.5 **Shutting down the NOS-Box**

To switch off the NOS-Box please press the power switch on the top right corner of the front cover. Then press the F5 key to shut down the box. Wait until the display switches off. If you want to restart the NOS-Box, press the F1 key.

Caution: Do not unplug the power cord as this could result in data loss on the NOS-Box.

5 Troubleshooting and Support

5.1 **No web access to "http://mirrorserver/" possible**
If you enter *http://mirrorserver* in a browser, you get a list of folders located on the NOS-Box. If this does not occur please enter the IP address displayed on the NOS-Box in place of the word "mirrorserver". If you see the folder list, the DNS alias is not correctly defined for *mirrorserver* within your network. Please contact your network administrator.

If you still have problems reaching the NOS-Box please check whether the NOS-Box is properly connected (see 0) and restart it if necessary.

5.2 **The NOS-Box is properly connected but cannot load any data from the provider/importer**
If the NOS-Box is properly connected but does not receive any data, this could be due to the following reasons:

1. You are using basic authentication to register your box at the MirrorServer/2 provider/importer instance. It could be that the user name and password are not entered correctly in the configuration. If you do not know your user name and password please call your importer/provider's hotline and ask for the parameters of basic authentication. With this information please follow the instructions in chapter "4.4.5 Using basic authentication".

2. The certificate to authenticate your NOS-Box to the MirrorServer/2 provider/importer may have expired or be invalid. Please contact your hotline.

5.3 **General failure**
In the event of a disruption of the MirrorServer/2 client functionality please start the diagnostic website. Details can be found in chapter "6.2 Diagnostic website"

6 The NOS-Box Interface

6.1 **Certificates**

Under the menu item "Maintenance" you can download new certificates to the NOS-Box. This could be necessary if the current certificate has expired or if it was included in the blacklist. In these cases a connection to your provider/importer is no longer possible.

A new certificate can be requested via your local support. It will be distributed together with a password.

To import the certificate click the menu item "Maintenance" on the NOS-Box GUI. The menu item "Add Certificates" is enabled by default (see Figure 9: Add a new certificate). Please click on the button "Browse ..." and in the file dialog select the new pkcs12 file that you received. Then enter the supplied password. To complete the task, click the button "Submit Query".

Figure 9: Add a new certificate

If the addition of the new certificate fails, contact your support and request a new certificate and/or the used password if necessary.

Before the new certificate is updated, the last one is automatically saved by the system. If the update fails you can restore the last certificate by selecting the menu item "*Restore Certificates*" then clicking the button *"Submit Query"* to complete the task.

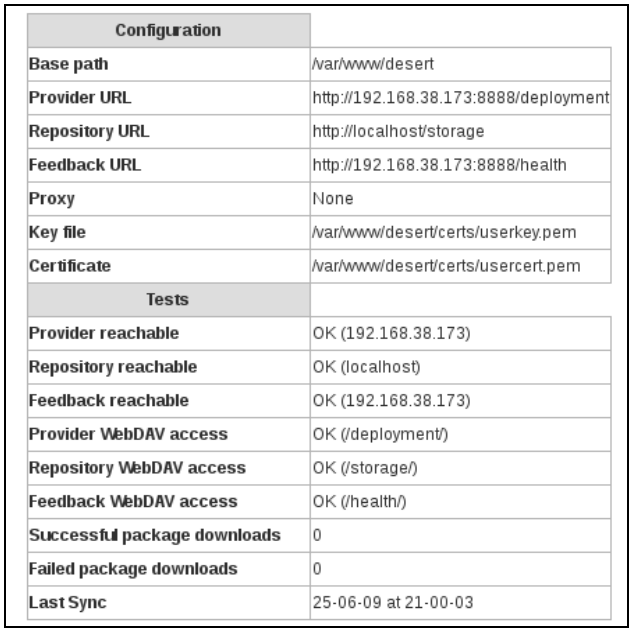
6.2 **Diagnostic website**

You can start the diagnostic program by typing the following URL in a web browser: *"http://mirrorserver/maintenance/diagnosis.py".* The web browser displays the "MS / 2 Diagnostics" page.

6.2.1 **Tests**

In the web browser, the "MS/2 diagnosis" page appears (see Figure 10: Extract from diagnostic website). When you call this page, the relevant configuration parameters of the system are shown

under the headline “Configuration”. Additionally some tests are carried out and the results are show under “Tests”, discussed below.



Configuration	
Base path	/var/www/desert
Provider URL	http://192.168.38.173:8888/deployment
Repository URL	http://localhost/storage
Feedback URL	http://192.168.38.173:8888/health
Proxy	None
Key file	/var/www/desert/certs/userkey.pem
Certificate	/var/www/desert/certs/usercert.pem
Tests	
Provider reachable	OK (192.168.38.173)
Repository reachable	OK (localhost)
Feedback reachable	OK (192.168.38.173)
Provider WebDAV access	OK (/deployment/)
Repository WebDAV access	OK (/storage/)
Feedback WebDAV access	OK (/health/)
Successful package downloads	0
Failed package downloads	0
Last Sync	25-06-09 at 21-00-03

Figure 10: Extract from diagnostic website

Hint: The call of the web page can take some time because real connectivity tests are performed. Please wait for the results.

6.2.1.1 **Provider reachable**

This label shows the status of a connection to the host of the MirrorServer/2 provider/importer that is listed under "Provider URL”. All update packages are loaded from the system shown under “Provider URL”.

Possible values:

- **OK** – Connection successfully tested
- **N/A (Proxy enabled)** – This only appears when you are using a proxy server because then this test cannot be performed.
- **FAIL** – Connection could not be successfully tested

6.2.1.2 **Repository reachable**

This label shows the status of the connection to the host for the MirrorServer/2 repository that is listed under "Repository URL".

Missing files that are necessary for the production of synchronicity are loaded from the repository URL if they are not locally available or could not be recovered from the trash.

Possible values:
- **OK** – Connection successfully tested
- **N/A (Proxy enabled)** – This only appears when you are using a proxy server because then this test cannot be performed.
- **FAIL** – Connection could not be successfully tested

6.2.1.3 **Feedback reachable**

This shows the status of the connection to the host of the MirrorServer/2 feedback server that is listed under "feedback URL" The generated feedback files are loaded after the update process showing the results of the synchronization with the server defined by the URL.

Possible values:
- **OK** – Connection successfully tested
- **N/A (Proxy enabled)** – This only appears when you are using a proxy server because then this test cannot be performed.
- **FAIL** – Connection could not be successfully tested

6.2.1.4 **"Provider WebDAV Access":**

Shows the status of the WEBDAV access to the URL that is listed under "Provider URL".

Possible values:
- **OK** – Connection successfully tested
- **FAIL** – Connection could not be successfully tested

6.2.1.5 **"Repository WebDAV Access":**

Shows the status of the WEBDAV access to the URL that is listed under "Repository URL".

Possible values:
- **OK** – Connection successfully tested
- **FAIL** – Connection could not be successfully tested

6.2.1.6 **"Feedback WebDAV Access":**

Shows the status of the WEBDAV access to the URL that is listed under "Feedback URL".

Possible values:
- **OK** – Connection successfully tested
- **FAIL** – Connection could not be successfully tested

Note: *Reachablility tests cannot be performed when using a proxy server. This is indicated by "N / A (proxy enabled)" and need not cause concern as long as all WebDAV tests can be performed successfully.*
*The distribution status and the health information of the system can be viewed via the central web interface of the provider/importer (see chapter **Fehler! Verweisquelle konnte nicht gefunden werden. Fehler! Verweisquelle konnte nicht gefunden werden.**).*

6.2.1.7 **Provider/Repository/Feedback reachable: FAIL**

If you use a proxy make sure that the client computer is physically connected to the network and can connect to your ISP. Make sure that no firewall blocks the access to the URL of your provider. Check that the display on the NOS-Box shows an IP address. If this is not the case please check the configuration with the NOS-configurator and/or restart the NOS-Box.

6.2.1.8 **Provider/Repository/Feedback WebDAV Access: FAIL**

Check that no firewall blocks the access and the required port is open. You can test this by calling the URL of your provider in a browser. If the page loads successfully the port is open. If it does not, please consult your system administrator, who can open the required port.
When using a proxy server please verify that your proxy information is correctly defined e.g. proxy authentication (user name, password). For further information please refer to chapter 0

Configuration.

If this procedure does not help to solve your problem please contact your local support.

6.2.2 **Log files**

To make the support of the system as simple as possible you are able to access log files through the maintenance interface using the link “Diagnostics” followed by “Logfiles”.

The files can be downloaded to your local PC. In all cases please forward them to your local support.

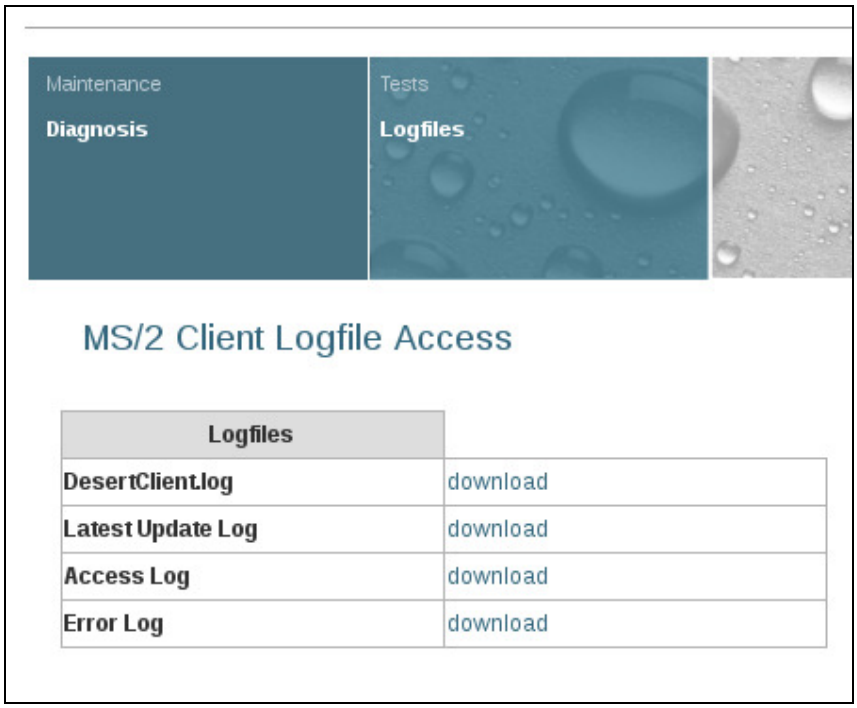


Figure 11: Client Logfile Access

7 Customer User Manual for the MirrorServer/2 Provider Management Functionality

This section describes how MirrorServer/2 Provider Management is used, as seen from the perspective of a NOS-Box user (customer). MirrorServer/2 Provider Management is implemented as a web application and can be accessed via a web browser. The URL to access the web application is "*http:// [Name/IP of you provider server]/ms2w3gui*" (in other cases you will get the URL from your importer/provider.

Remark: Only active users can look at and change their individual data via MirrorServer/2 Provider Management. Customers that are not yet active are not able to use the management functionality.

7.1 **User Interface (GUI) of MirrorServer/2 Provider Management**

Basic default settings, e.g. the booking of applications or changing of individual data, are managed via the MirrorServer/2 Provider Management functionality. Access is via a web browser and the web address of the provider/importer.

The web address is given to you when the NOS-Box is delivered by your provider or importer. If this is not the case, please ask them to give you the address.
After you have opened the provider's website you will see a login mask. Authentication is via *user name* and *password*.

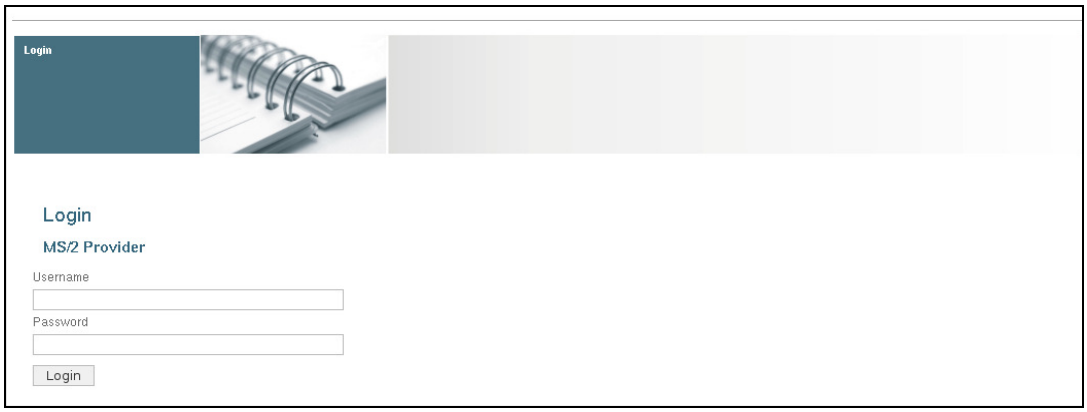


Figure 12: Authentication (for customer and provider)

7.2 **Customer configuration**

Once a user has logged in successfully, a configuration interface is opened. This interface provides the customer with all the main data, e.g. address and other individual data or data regarding booked applications.

Figure 13: Customer configuration

Description of the data fields

Except for the field *eMail* all input fields are obligatory and have to be filled. Fields that are *read-only* cannot be edited.

Road Number

The field *Road Number* is a read-only field.

Customer name

The field *Customer name* is a read-only field.

Customer internal name

The *Customer internal name* is entered during the registration process by the provider/importer. The field *Customer internal name* is a read-only field.

Username

The user name of the customer.

Contact

Name of the contact at the customer.

Country

Entry of the customer's country.

Description

Entry of a short description of the customer.

eMail

Entry of a valid customer's email address.

Location

Entry of the city.

Phone

Customer's telephone number.

Street

Customer's street name.

Zip

Entry of the postal code.

Description of fields

Application Data

All applications that are available for the customer are listed below the table column *Application Data*. Two sections are seen. One section shows all applications that are booked or can be booked. The other section shows system applications that cannot be changed by the customer. Beneath the table column *Applicationname* you will find the IDs of applications that can be booked and in the column on the right hand side the corresponding dropdown boxes. Each dropdown box contains the permitted values *available* and *booked.* The column *System Application* shows all applications that possess the status *required*.

Remark: If the value "available" is selected for an application, the corresponding application will not be booked. On the other hand, if the value "booked" is chosen, the application will be booked once the button "Save" is clicked.

Type

Selection of the target platform. *"DESERT-Linux"* is to be selected for the NOS-Box.

Description of the push buttons

Save

A single click on the push button *Save* saves all changed data. The user interface *Configuration* is refreshed and the customer sees the new data.

Cancel

A single click on the push button *Cancel* revokes all data entries that have not yet been saved. You still see the mask *Configuration*.

Validation of input fields

The following section describes which characters are allowed by the validation function. Only fields that can be edited are listed.

Username

The user name of the customer must not be blank, and needs to have a minimum length of six characters and a maximum length of 30 characters. The following characters are valid: A–Z a–z 0–9 . _

Contact

This field contains the name of the customer. It is a mandatory field and has to be filled. Digits from 0 to 9 are not allowed. Furthermore the following characters are **not** allowed: ! " # $ § % * + - : [ ] < = > ? @ ^ { ¦ } ~

Country

The field *Country* is a mandatory input field and has to be filled. The maximum length is 50 characters. The following characters are **not** allowed: ! " # $ § % & * + / : [ ] < = > ? @ ^ { ¦ } ~ \

Description

Entry of the name of the customer. This field is mandatory and must not be empty. The maximum length is 80 characters. The following characters are **not** allowed: " $ § % * + / : [ ] < = > ? @ ^ { ¦ } ~ \

eMail

Entry of a valid email address of the customer. The maximum length is 60 characters. The following characters are valid: A-Z a-z 0-9 . _ @ -

Location

The input field *Location* is mandatory and must not be empty. The maximum length is 50 characters. The following characters are **not** allowed: ! " # $ § % & * + / : [ ] < = > ? @ ^ { ¦ } ~ \

Phone

The phone number of the customer is mandatory and must not be empty. The maximum length is 20 characters. The following characters are valid: 0-9 + / \ - ( ) and the *SPACE* character.

Street

This field covers the street of the customer, is mandatory and must not be empty. The maximum length is 100 characters. The following characters are **not** allowed: ! " # $ § % * + [ ] < = > ? @ ^ { ¦ } ~ \

Zip

The input field for the postal code is mandatory and must not be empty. The maximum length is 10 characters. The following characters are allowed: A–Z a–z 0–9 . _

Errors

All input fields are mandatory and must be filled (except the field *eMail).* If they are not filled by the customer, the following error message is displayed:

Figure 14: Customer - Configuration - Validate Required Field

7.3 **Change Password**
With a single click on the *Change Password* option on the menu bar, the customer accesses the following user interaction.

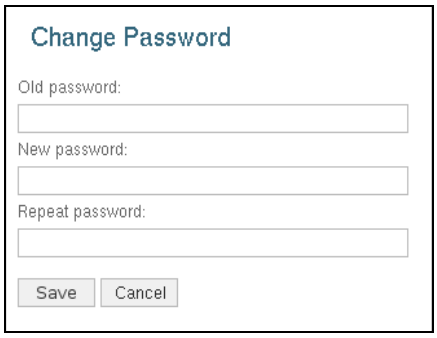


Figure 15: Customer - Change Password

Description of the input fields

Old password

Entry of the old password.

New password

Entry of the new password.

Repeat password

Repetition of the new password.

Description of the push buttons

Save

A single mouse click on the button *Save* saves the data.

Cancel

A single mouse click on the button *Cancel* cancels the process *Change Password*. The user is rerouted to the mask *Configuration*.

Validation of the input fields

The password needs to have at least 6 characters. The maximum length is 30 characters. The password may contain all special characters (except spaces and umlauts).

Errors

If case the customer enters an incorrect password in the input field *Old password*, the following message is displayed:

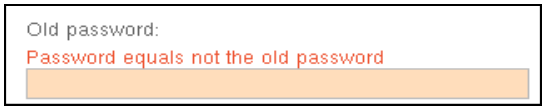


Figure 16: Customer - Change Password - Validation

If the customer enters a character string with fewer than 6 characters in the input field *New password*, the following message is displayed:

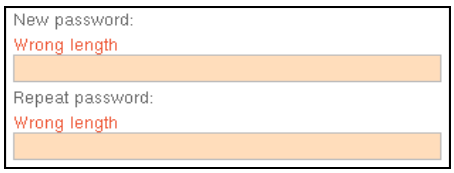


Figure 17: Customer - Change Password - Validate Length

If a user enters different character strings in the fields *Repeat password* and *New password*, the following message is displayed:

Figure 18: Customer - Change Password - Validate Repeat Password

7.4 Health Data

The area *Health Data* displays the customer's status of the processed files from the Distribution tab page. Among other data, information about the distributed package including the files it contains is provided. Furthermore data related to disk capacity and temperature is provided.

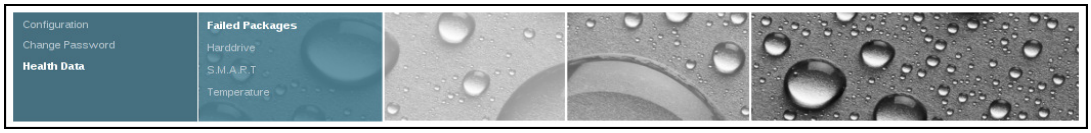


Figure 19: Customer - Health Data

7.4.1 Failed Packages

If you click the option *Failed Packages* on the main bar, files containing all incorrect packages are displayed. **(((Hier ist m.E. ein Fehler im Deutschen: Klickt der Customer im Hauptmenü auf den Punkt *Health Data*, werden ihm die Dateien angezeigt, die fehlerhafte Pakete enthalten.)))**

7.4.2 Feedback Files

If no feedback files with the prefix *failed* exist and there are therefore no incorrect packages for the logged-in customer, the customer sees an empty list with the remark "*No failed feedbackfiles available".*

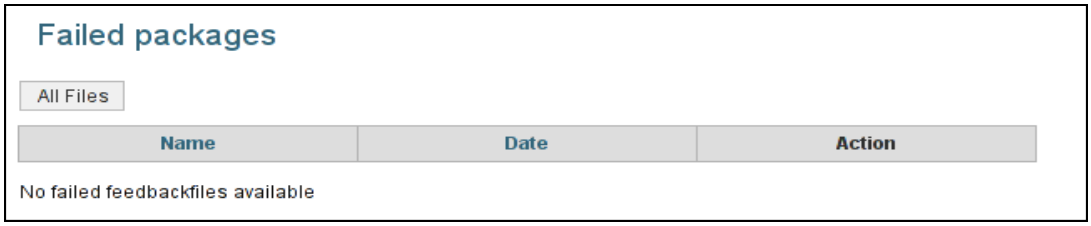


Figure 20: Customer – Health Data – No failed feedback files available

If there are incorrect files within a package, the status of the package is changed to *failed*. The feedback file that contains this incorrect package is assigned the prefix *failed_* in front of the filename. See Figure 21: Customer - Health Data - Failed feedback files

Figure 21: Customer - Health Data - Failed feedback files

A single mouse click on the button *All Files* shows the incorrect files as well as all feedback files in a list. The attributes are the name of the file with the date of the file generation. You can sort the files by clicking the header of a column.

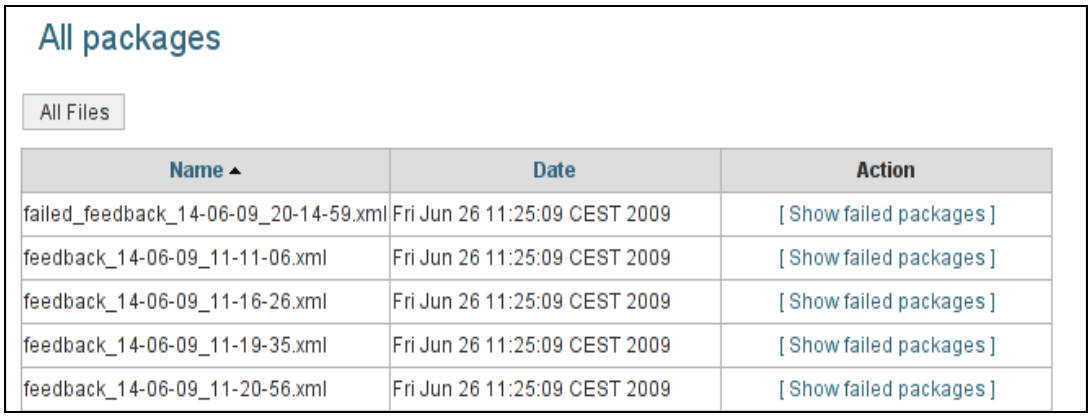


Figure 22: Customer – Health Data – All feedback files

If no feedback files exist for the logged-in customer, the customer sees an empty list with the remark: "*No feedbackfiles available".*

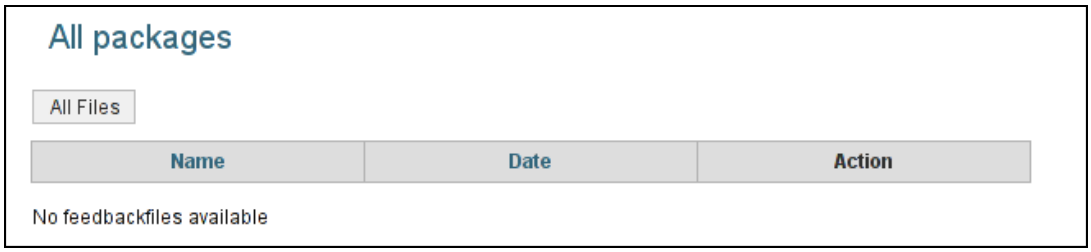


Figure 23: Customer – Health Data – No feedback files

7.4.3 **Packages**

The customer can look at the packages contained in the feedback file, whether incorrect or correct. The customer has to click on the hyperlink *[Show failed packages]* in the same line of the corresponding feedback file.

7.4.4 Failed Packages

If failed packages exist in the feedback file they are listed with name, date, time, size and status.

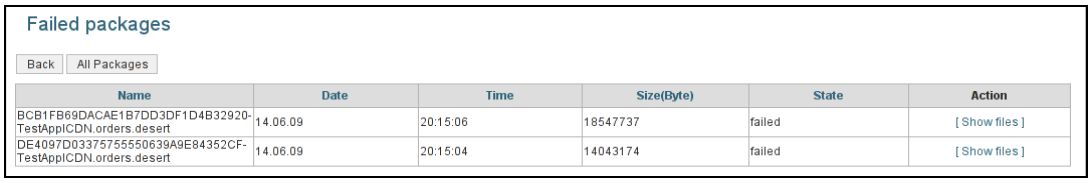


Figure 24: Customer – Health Data – Failed packages

If there are no failed packages in the feedback file, an empty list is shown with the remark: *"No failed packages available"*.

Figure 25: Customer – Health Data – No failed packages

7.4.5 All Packages

A click on the button *All packages* shows all packages, whether failed or not. The packages are shown with name, date, time, size and status (OK, failed listed). The text link *[show files]* can be selected for each listed package.

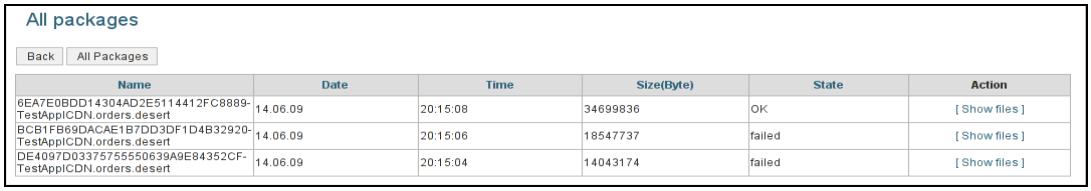


Figure 26: Customer – Health Data – All packages

An empty list with the remark *"No packages available"* is displayed if there are no packages in the feedback file.

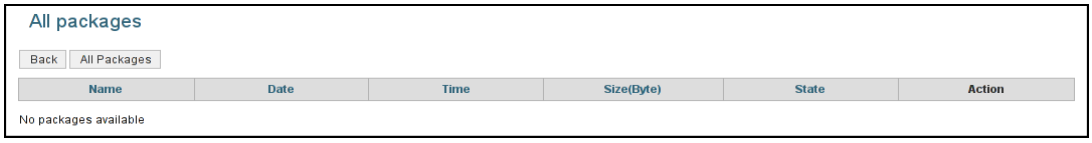


Figure 27: Customer – Health Data – No packages

7.4.6 **Files**

By clicking on the text link *[show files]* (see packages) of a selected package you can display all files within that package with the name, size, directory path, status, and hash sum.

File Information

Back

Name	Size(Byte)	Path	State	Hash
Blj.Q	932873	storage/slide/files/testappl /testfilesslide	added	79DDE51292A4705DEE2A60C6FC37736D
xpJ.e	845833	storage/slide/files/testappl /testfilesslide	added	6DFAFA9F48A2B1FFEAC1BBB9CA71FC11
XpZ.F	1001481	storage/slide/files/testappl /testfilesslide	added	B5475C1D85D499E25B4BC108CE8B8F7D
XDr.S	907273	storage/slide/files/testappl /testfilesslide	added	8195247029FD0087C93F53344EBCA01E
tvL.b	718857	storage/slide/files/testappl /testfilesslide	added	D0D1C9BB8A931AB2E84D511E770C872F
Oiz.R	913417	storage/slide/files/testappl /testfilesslide	added	A52A1526B4B4A9F7FAEBFF8D0CC26D63
vnX.t	928777	storage/slide/files/testappl /testfilesslide	added	EA4E05B217EA775E3E96A1DFFD4BF87E
xjR.O	956425	storage/slide/files/testappl /testfilesslide	added	53414EB475C7B4AFED88D554525E3F35
bPO.y	872457	storage/slide/files/testappl /testfilesslide	added	720492A73DC4BD32FCCE79085AFA23F8
Hkh.u	779264	storage/slide/files/testappl /testfilesslide	deleted	4EE71BABFFE09CFAF7EC5AAC0BB591D0
evZ.x	959488	storage/slide/files/testappl /testfilesslide	deleted	8E4CDA4191C6272288A3B0547BF8F26A
TCi.B	757769	storage/slide/files/testappl /testfilesslide	deleted	1E80B63331459ED9BDB1419B991009F0
EGv.S	1024009	storage/slide/files/testappl /testfilesslide	deleted	342BE6A5495FA7E6322934E93F5EB8E3
hrp.o	760839	storage/slide/files/testappl /testfilesslide	updated	EF92BF81ED9DB9B6AD4DE2BD59B8470C
kpM.x	966663	storage/slide/files/testappl /testfilesslide	updated	B7C3DE8E3707FA9CBA10DA137929BF2D
YIU.P	852999	storage/slide/files/testappl /testfilesslide	updated	B941FF5485F6637E0639B6EFC43CAA12
Rpf.v	998407	storage/slide/files/testappl /testfilesslide	updated	74EEAD8134A656855D218F792EB6F2F1

Figure 28: Customer – Health Data – File Information

7.4.7 **Harddrive**

A single click on the *Health Data* menu item followed by the submenu *Harddrive* displays the hard drive screen:

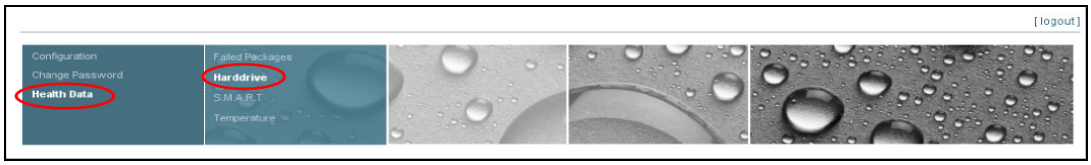


Figure 29: Customer – Menu – Harddrive

Below the menu the user gets information about the status of the disk. The data is also presented graphically:

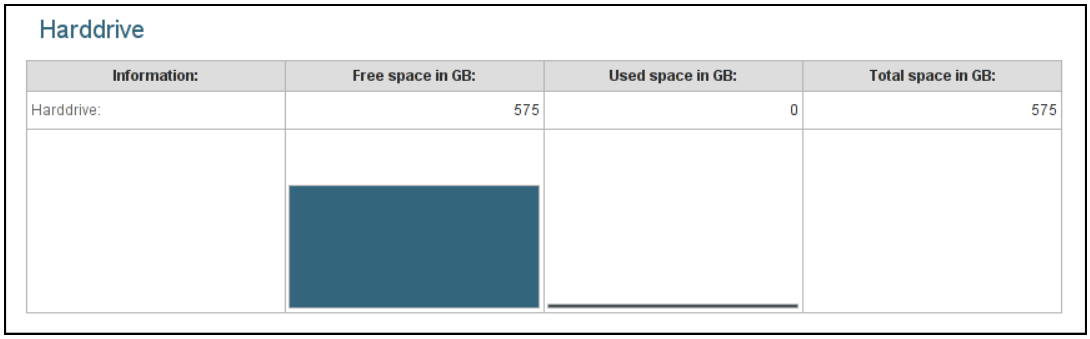


Figure 30: Customer – Health Data – Hard drive Information

Description of the displayed fields

Information

Displays the information described below.

Free space in GB

This shows the amount of free disk space in gigabytes.

Used space in GB

This displays the used disk space in gigabytes.

Total space in GB

Displays the total disk space in gigabytes.

Errors

If no information is available for the hard drive. a corresponding message is shown. By clicking on the button *Back* you can return to the *Health* page.

Mon Sep 08 09:53:17 UTC 2008:
No Harddrive information available
There are currently no health data for the client available, please contact your administrator for more information
Back

Figure 31: Customer – Health Data – No Hard drive Information available

7.4.8 S.M.A.R.T

SMART data is various information about the chip belonging to the hard disk of NOS-Box. This data can be retrieved by clicking on the *S.M.A.R.T.* menu in the right-hand menu.

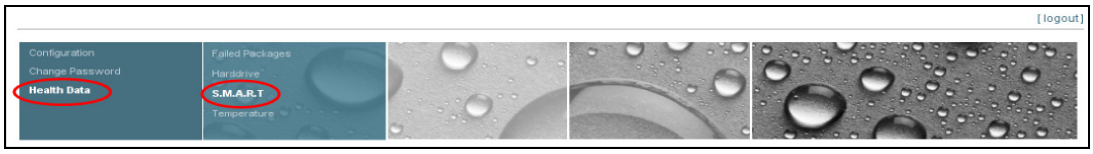
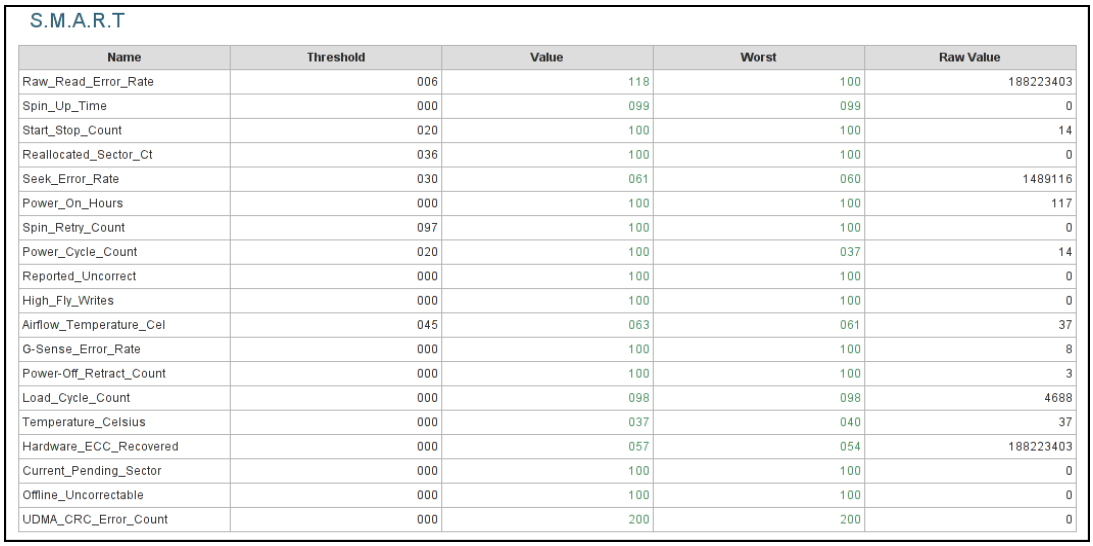


Figure 32: Customer – Menu – S.M.A.R.T



S.M.A.R.T

Name	Threshold	Value	Worst	Raw Value
Raw_Read_Error_Rate	006	118	100	188223403
Spin_Up_Time	000	099	099	0
Start_Stop_Count	020	100	100	14
Reallocated_Sector_Ct	036	100	100	0
Seek_Error_Rate	030	061	060	1489116
Power_On_Hours	000	100	100	117
Spin_Retry_Count	097	100	100	0
Power_Cycle_Count	020	100	037	14
Reported_Uncorrect	000	100	100	0
High_Fly_Writes	000	100	100	0
Airflow_Temperature_Cel	045	063	061	37
G-Sense_Error_Rate	000	100	100	8
Power-Off_Retract_Count	000	100	100	3
Load_Cycle_Count	000	098	098	4688
Temperature_Celsius	000	037	040	37
Hardware_ECC_Recovered	000	057	054	188223403
Current_Pending_Sector	000	100	100	0
Offline_Uncorrectable	000	100	100	0
UDMA_CRC_Error_Count	000	200	200	0

Figure 33: Customer – Health Data – S.M.A.R.T. Data

Description of the display fields

Name

This shows the name of the attribute.

Threshold

This shows the threshold defined for the value.

Value

This describes the concrete value for an attribute.

Worst

This displays the worst value of the shown attribute.

Raw Value

Displays the original value that was measured.

*Note: Each parameter is first saved as a **RAW value.** For a better understanding this value is converted to an assessable **value** (on a scale of 0 to 100, 200 or 255). 1 defines the worst case, 255 the best value. It always starts with the scale maximum and approaches **zero** as errors occur.*

Description of attributes

Note: This section lists only the most common disk parameters. There are many other parameters, including vendor-specific values.

Raw_Read_Error_Rate

Rate of uncorrectable errors when reading from the disk, leading to further reading.
Results: Indicates problems with the disk surface.

Spin_Up_Time

Average of the start time in (milli-) seconds.

Start_Stop_Count

Number of start / stop operations of a drive (including standby).

Reallocated_Sector_Ct

Number of used spare sectors.

Seek_Error_Rate

Errors in disk head positioning. Indicates non recoverable errors while reading from the disk leading to further reading.
Results: Indicates disk head positioning problem of the read/write unit.

Seek_Time_Performance

Indicates the average performance of operations during the positioning of the drive head.

Power_On_Hours

Distance in hours or seconds (including standby). Reason may be faulty cables, dirty contacts, over clocking or faulty hard disk drivers. The transfer is repeated in stages and more slowly. If this fails the operating system will crash.

Spin_Retry_Count

Number of faulty starts of the hard drive.

Calibration_Retry_Count

Number of attempts to calibrate the disk.

Power_Cycle_Count

Number of complete start / stop operations of the disk.

Temperature_Celsius

The drive temperature in ° C.

Hardware_ECC_Recovered

Number of corrected bit errors during read operations.

Reallocated_Event_Count

Number of remapping operations.

Current_Pending_Sector

Current number of unstable sectors.

UDMA_CRC_Error_Count

Number of CRC errors encountered.

Soft_Read_Error_Rate

Frequency of the off track errors.

Error Cases

If there is no SMART data available, you will get an error message:

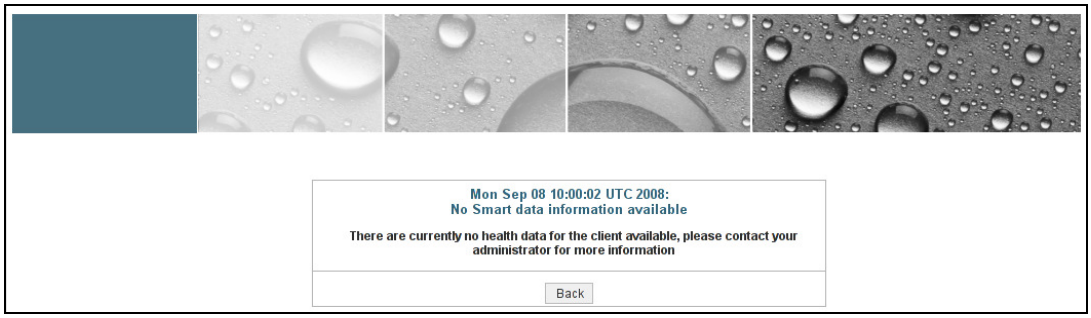

Mon Sep 08 10:00:02 UTC 2008:
No Smart data information available
There are currently no health data for the client available, please contact your administrator for more information
Back

Figure 34: Customer – Health Data – No Smart Data available

7.4.9 Temperature

To get detailed information about the temperature please select *Heath Data* followed by *Temperature* in the right-hand menu:

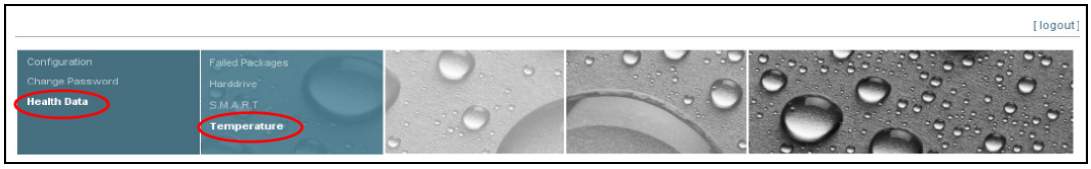


Figure 35: Customer – Menu – Temperature

You will see values for temperature and fan speed:

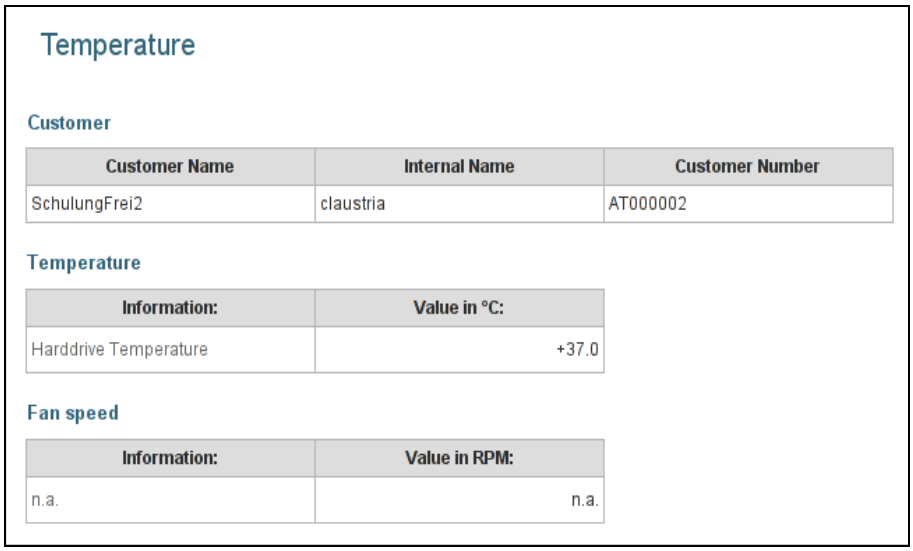


Figure 36: Customer – Health Data – Temperature

Description of the displayed fields

Customer Name

Displays the *customer's name*.

Internal Name

Displays the system's *internal name* for the customer.

Customer Number

Displays the *road number* of the customer.

Information

Displays the attribute to be shown.

Value in °C

Actual value in °C.

Value in RPM

Shows the value of RPM (*revolutions per minute*).

8 User documentation - configuration interface of the NOS-Box

This section describes the functions of the configuration interface. The interface is implemented as a web application and can be accessed through a web browser. The URL of the web application is ***"https://mirrorserver:10000"***. If the access is not possible, please check the instructions for troubleshooting (see 5.1 No web access to "http://mirrorserver/" possible).

The configuration interface offers the option to control the DMS-BB services and to change the configuration of the DHCP and DNS services. This should only be necessary in a support case, or if local circumstances require it.

Please consider: A changed DHCP / DNS server configuration can result in serious problems in an existing network if you already have a DHCP / DNS server. This should be checked and agreed with your local administrators before it is changed.

8.1 Configuration interface (GUI)

To access the configuration interface connect to URL *"https://mirrorserver:10000"* with a web browser (IE v6.0, v3.5 FX and above). If you try to use unencrypted access via http you will get an error informing you that you have to use the encrypted web address via https.

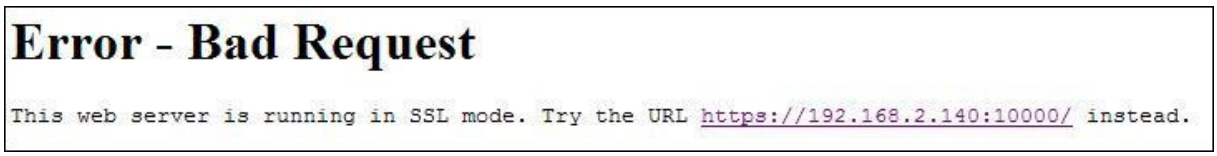


Figure 37: Error message for unencrypted access without SSL

8.1.1 Comparing and accepting the certificate

If you access the encrypted web address, a problem with the security certificate of the NOS-Box may be reported. The certificate of the NOS-Box is not certified by a certificate authority, you have to ignore these errors. The certificate can be accepted in order to prevent the error message during future access.

Fingerprint MD5: 3D:A2:7F:32:96:48:7C:D1:C8:DC:69:1F:49:D1:AB:BF
Fingerprint SHA1: B4:A1:32:0B:03:16:80:1A:25:78:C8:62:54:54:D5:7A:EA:3B:5F:C4

The following steps on how to ignore and verify the authenticity of the certificate are shown using the example of Internet Explorer 8 and Mozilla Firefox 3.5.0.

Internet Explorer: ignoring the certificate error
To ignore the certificate error, click "*continue to this website (not recommended)*".

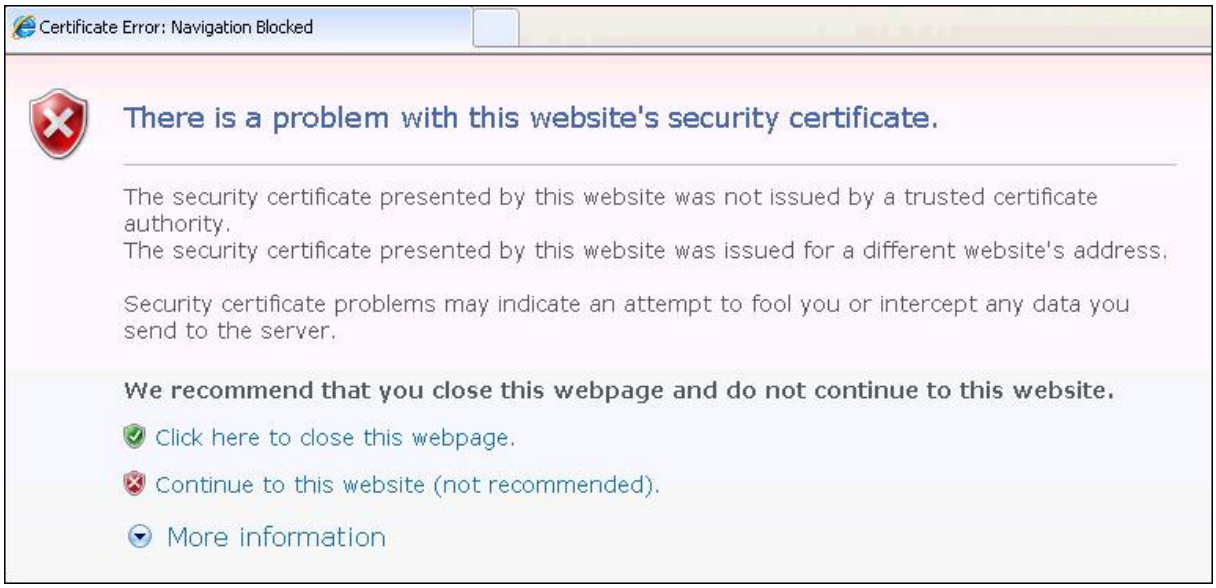

Certificate Error: Navigation Blocked
There is a problem with this website's security certificate.
The security certificate presented by this website was not issued by a trusted certificate authority.
The security certificate presented by this website was issued for a different website's address.
Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.
We recommend that you close this webpage and do not continue to this website.
Click here to close this webpage.
Continue to this website (not recommended).
More information

Figure 38: Ignoring the certificate error (IE)

Internet Explorer: viewing the certificate
On the following web page you will see a *Certificate Error* to the right of the input field. You can view the certificate by clicking on that error.

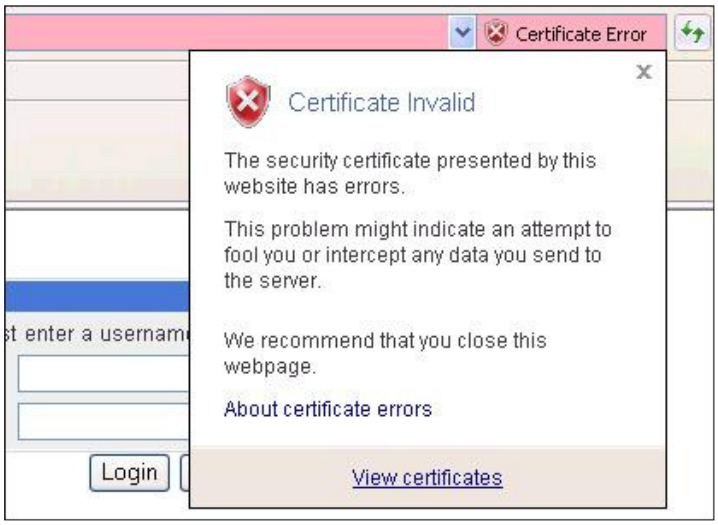

Certificate Error
Certificate Invalid
The security certificate presented by this website has errors.
This problem might indicate an attempt to fool you or intercept any data you send to the server.
We recommend that you close this webpage.
About certificate errors
View certificates
Login

Figure 39: Viewing the certificate (IE)

Internet Explorer: comparing certificates
By clicking the *Details* tab in the opened window, the *Thumbprint* of the certificate is shown (Fig.40). Compare this fingerprint with the hash values shown under 8.1.1. The connection is secure only if the fingerprints match these values.

Under certain circumstances, in some web browsers only one of two fingerprints may be shown; this is not a bug.

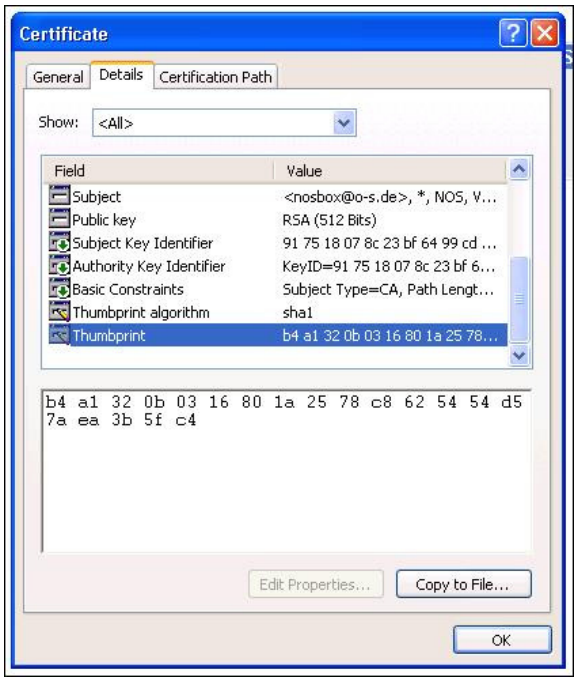


Figure 40: Viewing certificate fingerprints

Please consider: If one of the fingerprints of the certificate does not match the values in 8.1.1, then close the web browser and contact your administrator or your local hotline immediately. Under certain circumstances, a security problem may exist in your network.

Internet Explorer: accepting the certificate
After a successful comparison of the fingerprints, the certificate can be permanently accepted. To do this, select *Install certificate* from the *General* tab. Finally, confirm the installation of the certificate. Queries that appear have to be confirmed with their default values.

Security Warning
You are about to install a certificate from a certification authority (CA) claiming to represent:
*
Windows cannot validate that the certificate is actually from "*". You should confirm its origin by contacting "*". The following number will assist you in this process:
Thumbprint (sha1): B4A1320B 0316801A 2578C862 5454D57A EA3B5FC4
Warning:
If you install this root certificate, Windows will automatically trust any certificate issued by this CA. Installing a certificate with an unconfirmed thumbprint is a security risk. If you click "Yes" you acknowledge this risk.
Do you want to install this certificate?
Yes
No

Figure 41: Installing the certificate (IE)

Mozilla Firefox: ignoring certificate errors
Add an exception to the browser by clicking on *I Understand the Risks* and then A*dd Exception...*

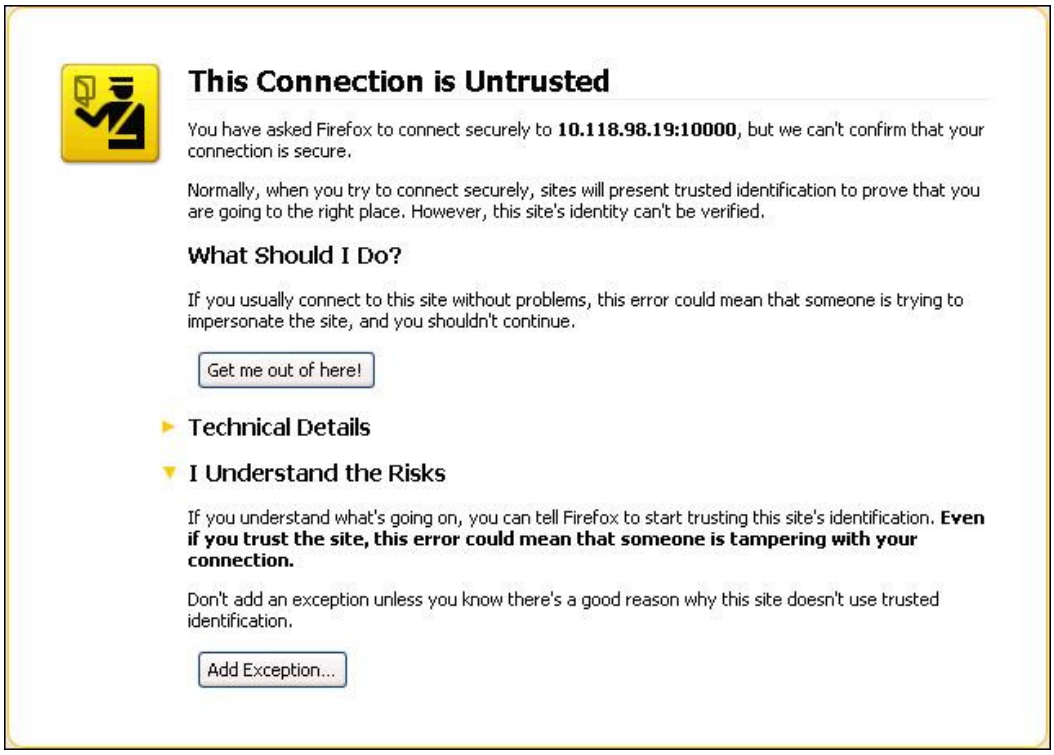

This Connection is Untrusted
You have asked Firefox to connect securely to 10.118.98.19:10000, but we can't confirm that your connection is secure.
Normally, when you try to connect securely, sites will present trusted identification to prove that you are going to the right place. However, this site's identity can't be verified.
What Should I Do?
If you usually connect to this site without problems, this error could mean that someone is trying to impersonate the site, and you shouldn't continue.
Get me out of here!
Technical Details
I Understand the Risks
If you understand what's going on, you can tell Firefox to start trusting this site's identification. Even if you trust the site, this error could mean that someone is tampering with your connection.
Don't add an exception unless you know there's a good reason why this site doesn't use trusted identification.
Add Exception...

Figure 42: Ignore the certificate error (FX)

Mozilla Firefox: viewing and comparing the certificate
Clicking on *View ...* shows the certificate. Compare the fingerprint with the hash values shown under 8.1.1. The connection is securely encrypted only if the fingerprints match these values.

Under certain circumstances, in some web browsers only one of two fingerprints may be shown; this is not a bug.

Please consider: If one of the fingerprints of the certificate does not match the values in 8.1.1, then close the web browser and contact your administrator or your local hotline immediately. Under certain circumstances, a security problem may exist in your network.

After a successful comparison of the fingerprints a security exception rule can be created, click on C*onfirm Security Exception*. The certificate is now accepted, the certificate error no longer occurs, and the encrypted connection to the NOS-Box is considered to be trustworthy.

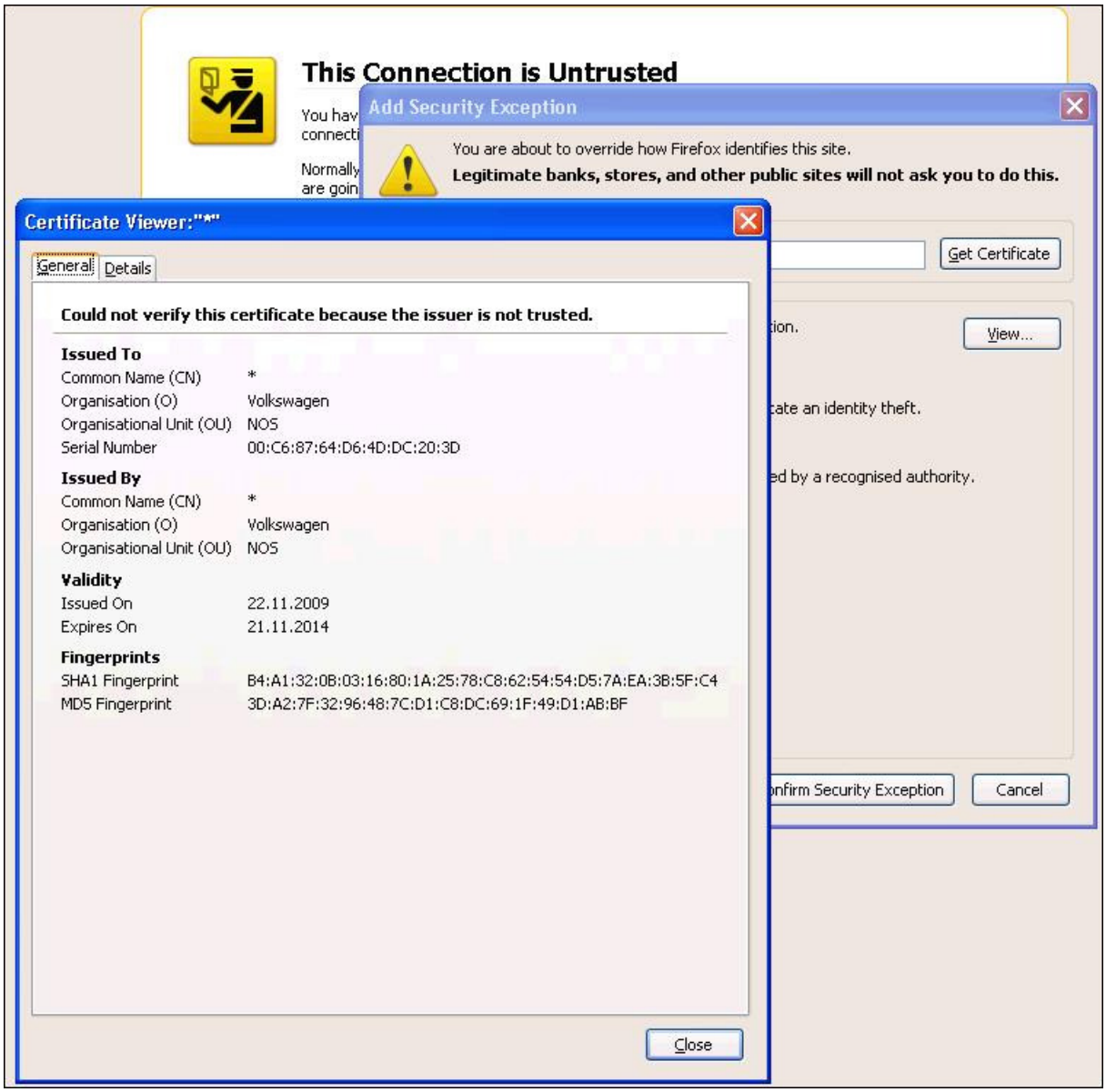


Figure 43: View certificate fingerprints (FX)

After the successful acceptance of the certificate or addition of a permanent security exception, you are automatically forwarded to the login screen.

8.1.2 Login mask and menu

Authentication on the login screen has to be performed using *user name* and *password*. You obtain this required information upon delivery of the box (importer). As a dealer you can get this information from your local importer, or it will be sent to you upon delivery of the NOS-Box.

Figure 44: Login mask

On the left side you see the menu. You can navigate through the various functions of the configuration interface.

Figure 45: Navigation of the configuration interface NOS-Box

8.1.3 System Information

After successful login, the *System Information* tab is shown. The site provides general information.

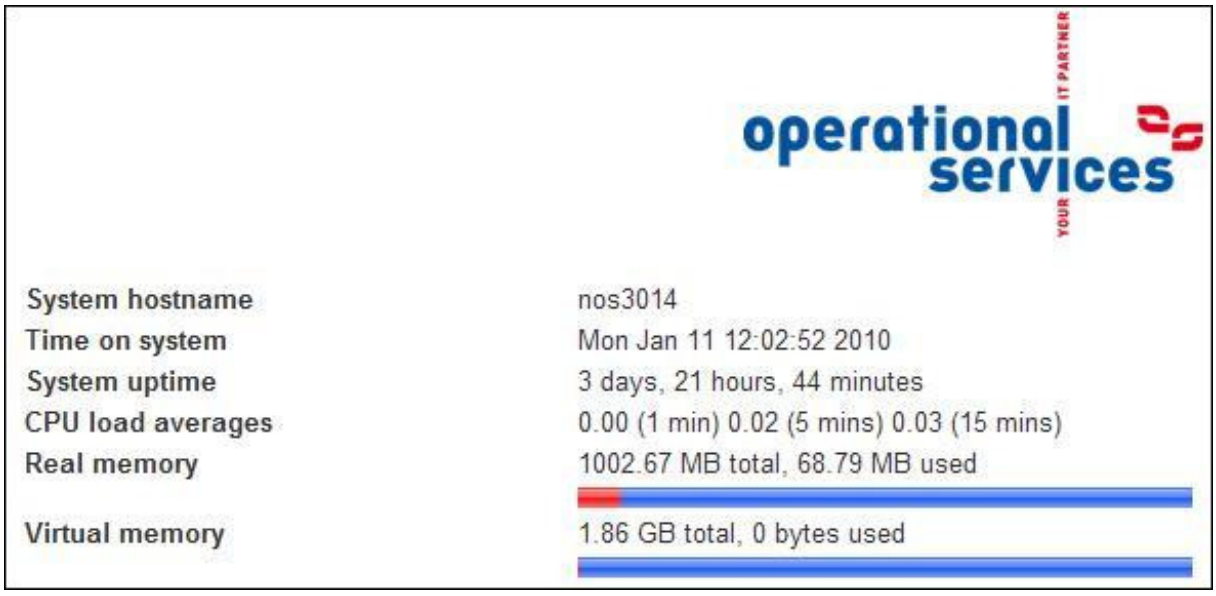


Figure 46: NOS- Box System Information

Field description

System hostname
Name of the NOS-Box

Time on system
Local system time of the NOS-Box (UTC)

System uptime
Time since last reboot

CPU load averages
Average CPU load (last 1, 5 and 15 minutes)

Real memory
Total and used physical memory

Virtual memory
Total and used virtual memory

8.1.4 NOS-Box User Management

A click on *NOS-Box Users* opens User Management. Depending on the logged-in user, the ability to change passwords, add descriptions of the user, create custom logout times etc. is offered.

User rules (default values)

User	DHCP	DNS	DMS-BB	Change Password for
dealer	read-only	read-only	no access	-
dms-bb	no access	no access	read/write	dms-bb
support	read/write	read/write	read/write	dms-bb; support
Master	no access	no access	no access	dms-bb; support; master; dealer

Figure 47: NOS-Box Users

Field description

Delete Selected
It is not possible to delete users. This function is not implemented due to security reasons.

A click on a user takes you to another mask, where you can change several user settings.

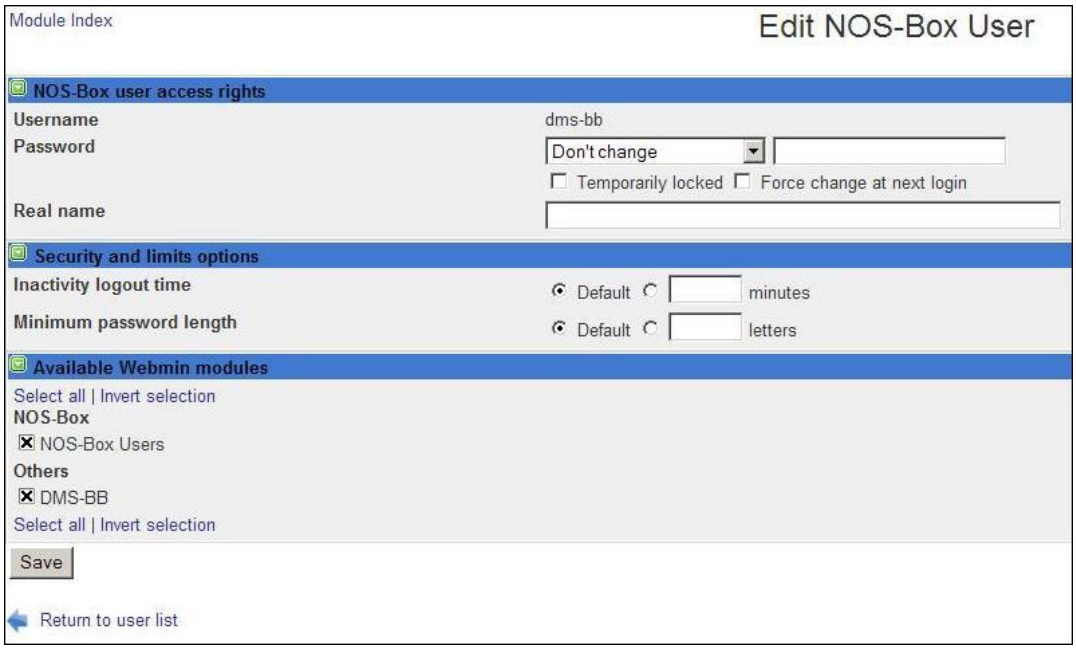


Figure 48: Edit NOS- Box User

Field description

NOS- Box user access rights

Username
Chosen account.

Password
Various possibilities: leaving the password in its default setting (Don't change), changing the password (Set to..), synchronizing the password with the Unix settings (Unix authentication) or not setting a password (No password accepted).

Please consider: You are free to change the passwords. For support reasons, you are advised to leave the passwords as the secure default values, or store the passwords in a safe place. If the changed master password is lost, it is not possible to restore it. In this case, the CF card must be exchanged.

Temporarily locked
Lock a user; you are advised not to activate this setting.

Force change at next login
Force a user to change his password at next login.

Real name
Real name or description of the user.

Security and limits options

Inactivity logout time
Set the time period of inactivity, after which the user is automatically logged out.
Default setting = 10 minutes

Minimum password length
Force the use of more secure passwords.

Default setting = 7 characters

Available modules
Shows which modules are visible for the chosen user (8.1.3 User rules (default settings)). It is not possible to change these settings.

Click the *Save* button to change the configuration.

8.1.5 **DHCP Server**

A click on *DHCP Server* opens the DHCP server configuration (Fig. 49). Here you can add a DHCP server to your network.

Please consider: A changed DHCP server configuration can result in serious problems in an existing network if you already have a DHCP server. This should be checked and agreed with your local administrators before it is changed.

Please consider: Before setting up the NOS-Box as a DHCP server, a fixed IP address has to be assigned to the NOS-Box. Consult the NOS configurator section in 4.4.2 of this manual.

For a further description of the configuration options, please visit the following websites:

http://www.webmin.com (Webmin homepage)
http://doxfer.com/Webmin (Webmin Wiki)
http://doxfer.com/Webmin/DHCPServer (DHCP server documentation)

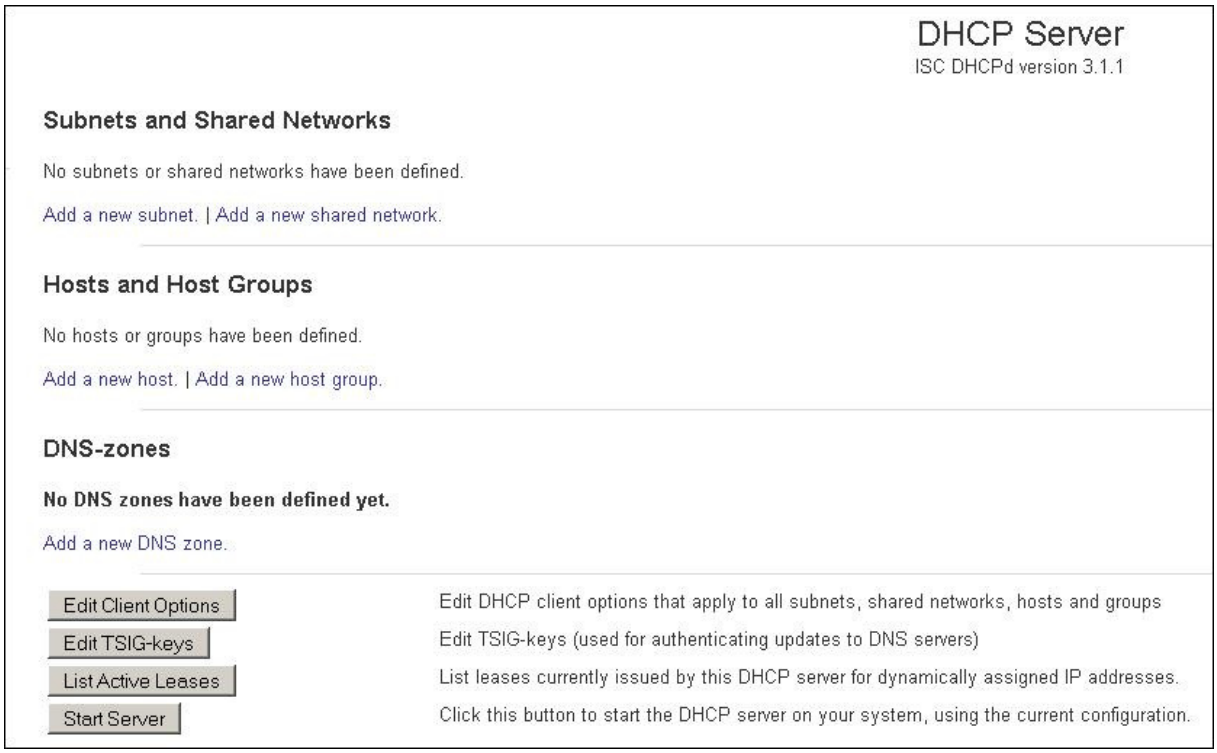

DHCP Server
ISC DHCPd version 3.1.1
Subnets and Shared Networks
No subnets or shared networks have been defined.
Add a new subnet. | Add a new shared network.
Hosts and Host Groups
No hosts or groups have been defined.
Add a new host. | Add a new host group.
DNS-zones
No DNS zones have been defined yet.
Add a new DNS zone.
Edit Client Options
Edit DHCP client options that apply to all subnets, shared networks, hosts and groups
Edit TSIG-keys
Edit TSIG-keys (used for authenticating updates to DNS servers)
List Active Leases
List leases currently issued by this DHCP server for dynamically assigned IP addresses.
Start Server
Click this button to start the DHCP server on your system, using the current configuration.

Figure 49: DHCP Server configuration

8.1.6 **DNS server**

A click on *DNS Server* opens the DNS server configuration (Fig. 50). Here you can add a DNS server to your network.

Please consider: A changed DNS Server configuration can result in serious problems in an existing network if you already have a DNS server. This should be checked and agreed with your local administrators before it is changed.

For a further description of the configuration options, please visit the following websites:

http://www.webmin.com (Webmin Homepage)
http://doxfer.com/Webmin (Webmin Wiki)
http://doxfer.com/Webmin/BINDDNSServer (Bind DNS Server Documentation)

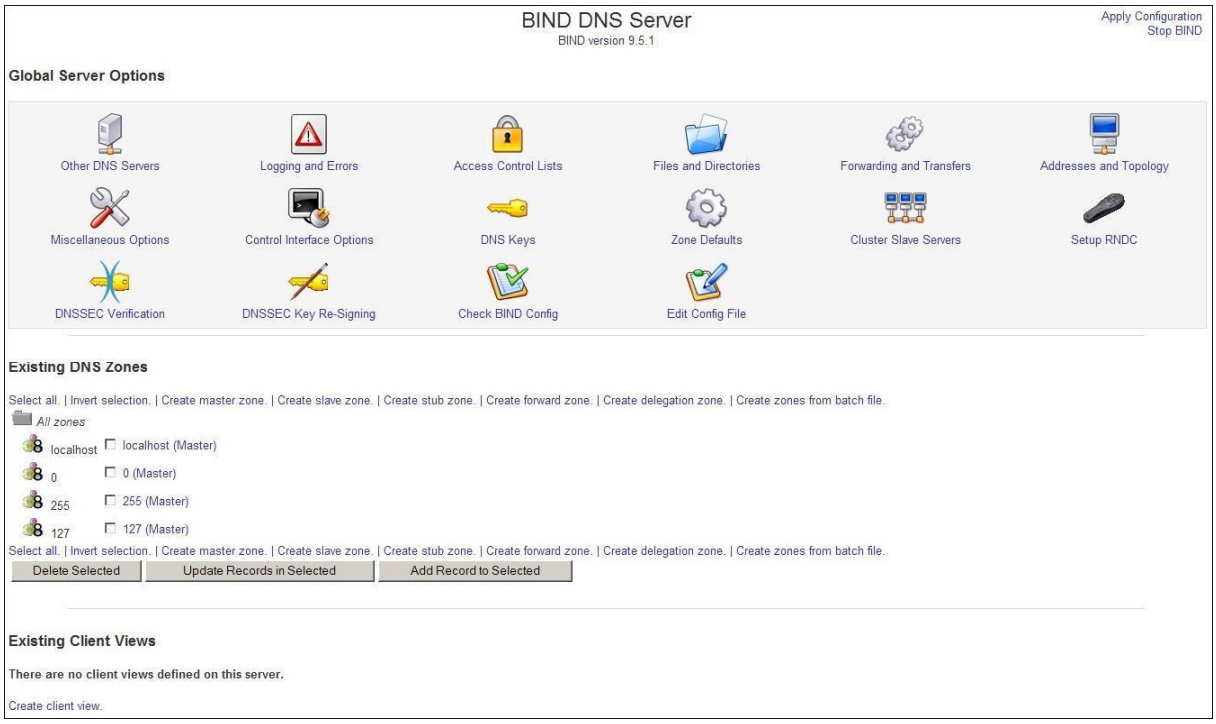

BIND DNS Server
BIND version 9.5.1
Apply Configuration
Stop BIND
Global Server Options
Other DNS Servers
Logging and Errors
Access Control Lists
Files and Directories
Forwarding and Transfers
Addresses and Topology
Miscellaneous Options
Control Interface Options
DNS Keys
Zone Defaults
Cluster Slave Servers
Setup RNDC
DNSSEC Verification
DNSSEC Key Re-Signing
Check BIND Config
Edit Config File
Existing DNS Zones
Select all. | Invert selection. | Create master zone. | Create slave zone. | Create stub zone. | Create forward zone. | Create delegation zone. | Create zones from batch file.
All zones
localhost
localhost (Master)
0
0 (Master)
255
255 (Master)
127
127 (Master)
Select all. | Invert selection. | Create master zone. | Create slave zone. | Create stub zone. | Create forward zone. | Create delegation zone. | Create zones from batch file.
Delete Selected
Update Records in Selected
Add Record to Selected
Existing Client Views
There are no client views defined on this server.
Create client view.

Figure 50: DNS server configuration

8.1.7 **DMS-BB Support**

A click on *DMS-BB* opens the *DMS-Backbone* support site (Fig. 51). This enables you to manage the DMS-BB services if you need support.

Please consider: The configuration of the DMS backbone is to be managed by the "DMS-Backbone website". It can be accessed by opening the following URL: "https://mirrorserver:8443".
If access is not possible, please check the instructions for troubleshooting (see 5.1 No web access to "http://mirrorserver/" possible).
For further information please consult the DMS-Backbone server manual..

Please consider: The DMS-BB services should be managed in the case of support only with the instruction of your support or hotline.

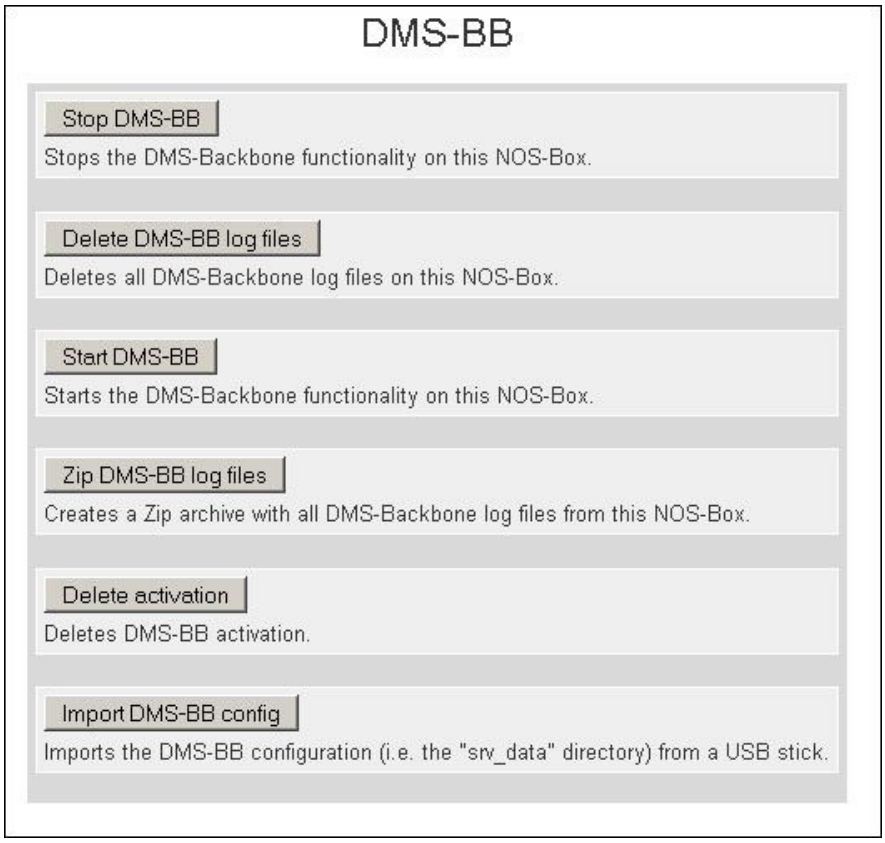

DMS-BB
Stop DMS-BB
Stops the DMS-Backbone functionality on this NOS-Box.
Delete DMS-BB log files
Deletes all DMS-Backbone log files on this NOS-Box.
Start DMS-BB
Starts the DMS-Backbone functionality on this NOS-Box.
Zip DMS-BB log files
Creates a Zip archive with all DMS-Backbone log files from this NOS-Box.
Delete activation
Deletes DMS-BB activation.
Import DMS-BB config
Imports the DMS-BB configuration (i.e. the "srv_data" directory) from a USB stick.

Figure 51: DMS-BB support site

Field description

Stop DMS-BB
A click on this button stops the DMS-BB services (Fig.52).

Access to the DMS-Backbone server website (see 8.1.7 DMS-BB support) is not possible after you have stopped the service. An error occurs when you try.

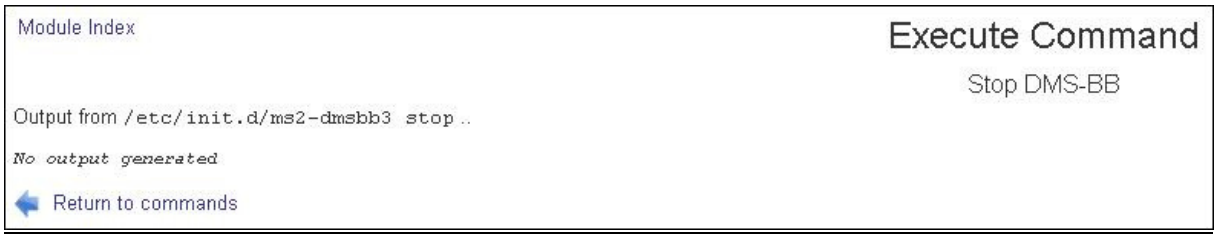


Figure 52: DMS-BB stop service

Delete DMS-BB log files
A click on this button irreversibly deletes all log files of the DMS-BB services.

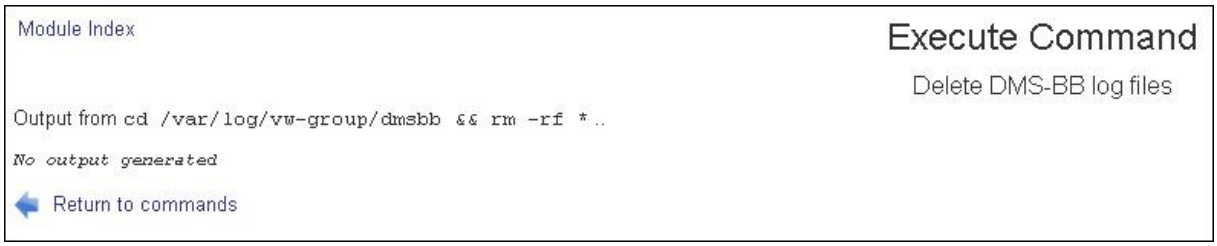


Figure 53: DMS-BB delete log files

Start DMS-BB
A click on this button starts the DMS-BB services.

Access to the DMS-Backbone server website (see 8.1.7. DMS-BB support) is now possible. For further information please consult the DMS-Backbone Server manual.

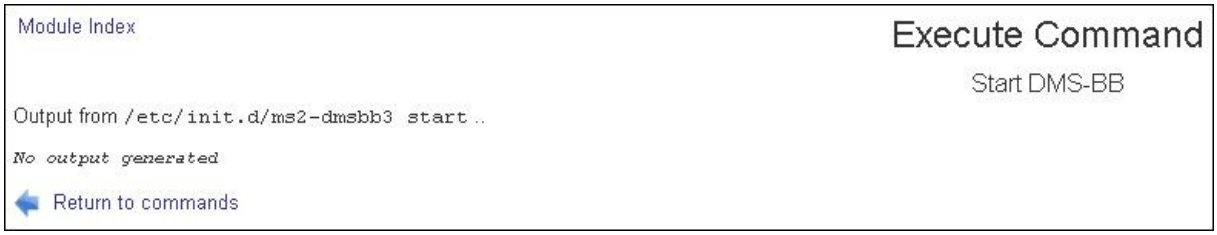


Figure 54: DMS-BB start service

Zip DMS-BB log files
A click on the button zips all log-files of the DMS-BB service in one zip file, which is available for download afterwards (Fig.52). Right click and choose *Save as…* to download the file to a location of your choice.

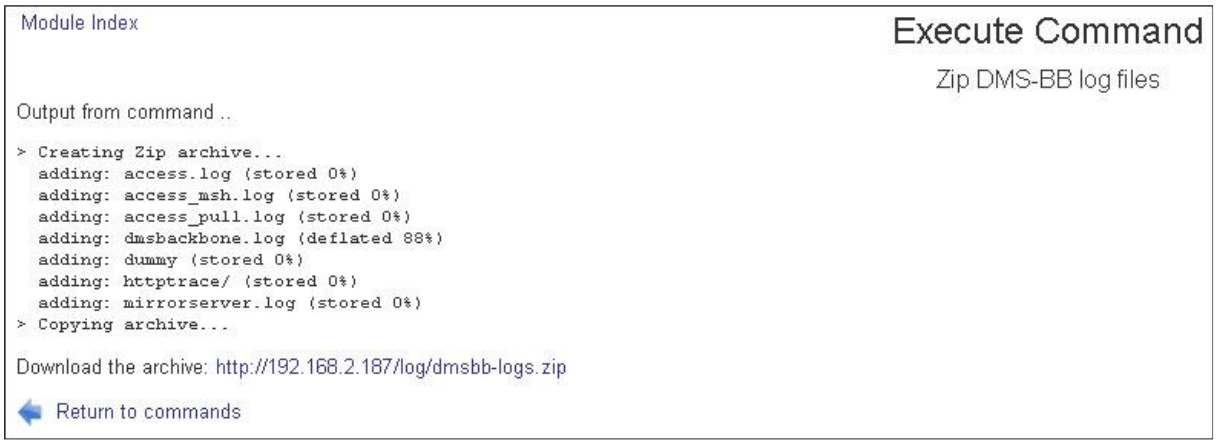


Figure 55: DMS-BB zip & download log files

Delete activation
A click on the button irreversibly deletes the keyfiles, which are needed for communication of the DMS-BB service.

Please consider: Deleting the keyfiles should only be done on the instruction of your support, re-activation has to be performed manually by trained personnel.

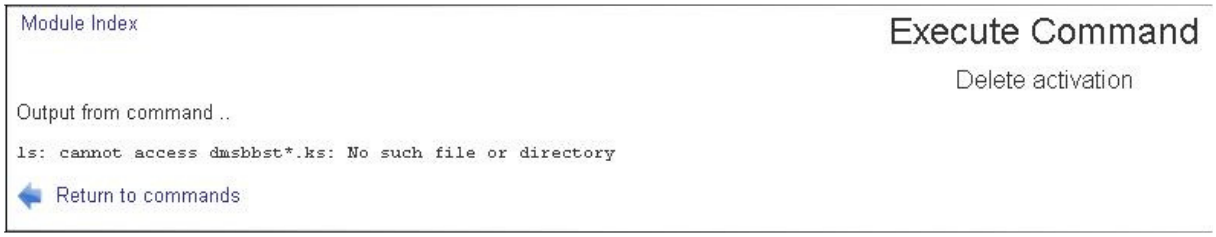


Figure 56: DMS-BB delete activation

Import DMS-BB config
A click on this button loads a pre-existing DMS-BB configuration from a USB stick. The stick has to be loaded as */dev/sdb* (automatically during insertion in a USB port of the NOS-Box).

Please consider: Remove existing USB storage devices from the NOS-Box before inserting the stick with the DMS-BB configuration.

A copy of a pre-existing configuration of a DMS-Backbone has to exist on the USB stick (directory *srv_data* from existing DMS-BB on the USB stick).

9 Glossary

The glossary is located in the document *"MirrorServer2-Glossary"*.